and 70 per cent, scrap. The mean composition of such a charge is about as follows:—
30 kg. Pig Iron with 1-2 kg. 0+<KJ kg. Si f (H>0 kg. Mn-f-0-15 kg. 1> 70 „ Scrap
„ (H)7 „ 0+ 4 -0-:W „ Mn-((H)7 „ 1>
"
l¥7k&"C+(NJ kg. Si+0'ltf „ Mu f -0-22 kg. P Contained in final metal 0-10 „ 0
+ 0-IJU ,, Mu-fO-Oo „ 1>
Thushavebeeneliniinatodl-i7kg.O+()-:J kg. Si f 0*05 kg. Mn+0-17 kg. l>
The amounts of oxygen required for elimination o£ the above are: —
1-17 kilogrammes Ox 1 •«'& (from &">)• 1 "54 per <x»nt,
0-30 „ Sixl'H („ 32) tKM
..... ^ ,, ;M) 0-19
,, ;W) 0-22
Total 2"J9 por rt^ut. ()
O
0-65 ;*, MiiXO'29(„ ;M) 0-19 „ ()
0-17 „ Pxl-aJ)(„ 3,'i) 0"22 M 0
For the estimation of the oxygen combined with iron and remaining in the slag, the weight of the nlag nuiHt be fixed. Let it be assumed that the charge in contaminated with 1 per-cent. of sand. The amounts of phosphoric acid and niliea which must go into the Blag can be estimated an follows :—
lV>ft sioa
From charge . (H7X2-29 ()%1i) j)(»r cent. O'JIX^'M IHH por eoni. ,,
Hand in charge I '00 1t
,, furnace at ructiiro (frotn 30e) O'ir> ,,
Total J V >/} 0-39 por ccuit. Si<)a 2*09 prr cnnt.
Lime required is ascertained thus :—
0-39 iy>ftX I*r>8: ::()-()2 or <u»nt. C?uC).
Total r>'-H) p<«M^nt. (-a() Of which there will come from the basic structure
A) 4 ••! 5 percent Leaving 1-04]x>r c<Hnt. (-ii<)
which must be added in the form of 2xl*04=2-08 per cent. limestone (vide 8lB).
This limestone brings again 2 per cent. 8i()2 or 2*08 x 0-02= 0*04 per cent. SiOa into the slag, so that there is present a total of 2-09+0'04=218 per cent. BiOa,